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# Assessment of cognitive function with MMSE in chronic schizophrenic inpatients

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## **Background**

It is known that the private psychiatric hospitals in Greece, contribute to the psychiatric care almost with equal number of beds with those of the public sector.

A large number of chronic patients with serious mental disorder are hospitalized in the private sector, either because the public sector is not able to hospitalize them for long periods, or because a private clinic might be closer to the patient's habitat so that the relatives may have the possibility to visit them more often. In the frame of the Psychiatric Reform, the private sector has developed and adapted, in the direction of new data of benefits of Psychiatric care. However, the interaction of the chronicity of the disease with prolonged or life hospitalization has unknown effects on cognitive function. The aim of this project was to study if and how much the cognitive function of schizophrenic patients can be influenced by the long term of hospitalisation.

### Materials and methods

The study population included 60 patients (30 men, 30 women) suffering from schizophrenia – residual type. Their mean age was 53.43 years for men (range 40–70 years) and 49.66 years for women (range 38–64 years).

All were inpatients of a private mental hospital. The patients of this study were hospitalized for the following reasons:

- 1. Lack of support environment
- 2. Severe symptoms that do not allow their presence at home

- 3. Their family cannot support them financially
- 4. In some cases they have been rejected by their families

Cognitive function was assessed with the MMSE. A protocol registered clinicodemographic characteristics and other relevant patient data

#### Results

The average time from first appearance of schizophrenia was 20 years for men (17-24) and 21 for women (16-30). 21 men (70%), 5 divorced (16.67%), 4 in widowhood (13.33%), 18 women were single (60%), 7 divorced (23.33%), 2 in widowhood (6.67%), 3 married (10%). The average duration was 33,43 years for men (range 21– 49 years) and 28.26 years for women (range 13 - 41 years). In men, the mean hospitalization was 100.6 months, or 8 years and 4.5 months or 3060 days (range 61 months (5.08 years)-231 months (19.25 years). In, the mean hospitalization was 103 months, or 8 years and 7 months or 3135 days (range 52 months (4.33 years)-318 months (26.5 years). In men the MMSE score ranged from 17 to 28 (mean 24.2, little above the 24 that is considered cut off point for this test). In women the MMSE score ranged from 19 to 30 (mean 22.93, under the 24 that is considered cut off point for this test. 10 men (33,33%) had a MMSE score below 24 (4 were graduates of public school (36.36%), 4 graduates of junior high school (50%) and 2 graduates of high school (33.33%). 18 women (60%) had a MMSE score below 24 (16 were graduates of public school (66.67%), the 1 graduate of junior high school (20%) and the 1 graduate of high school (100%).

#### Discussion

The results of the current study suggest that one third of men and two thirds of women scored below the threshold of the MMSE. For the patients included in the study, the exterior stimuli are minimal, their daily activities are limited and the only information they receive is from the television, if they watch, or from their participation in groups of a daily program of activities, if they participate. Their interactions and their capacity for communication and expressing feeling is practically null. We must not forget that the use of anti-psychotic treatment for these patients is long-term. Furthermore the simultaneous use of benzodiazepines is known that can influence cognitive function and specially the one that is related with memory. An important problem is the legal competency of patients. It is very difficult, to consider a patient incompetent for legal actions if he scored 23 or even 22 in the MMSE, without having hallucinations when he has to decide about his property, but the long-lasting hospitalisation, deprived him from new information, or consider capable, somebody that achieved 25 or 26 and simply is found above the limit, while hallucinations are present and can influence considerably his critical faculty. The educational level (reserve of knowledge) apparently influence considerably the final result. Checking the subgroups of men and women, concerning the years of study, we observe supremacy of men in the subgroup with 12 years of study. It is considered necessary to create new scales to estimate the ability of having any lawful acts, and not consider these patients incompetent, just because they did not achieve the expected results in only one test, as the widespread MMSE.

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